

Planting for Pollinators



Brent Sarchet
MSU/Lewis & Clark County Extension Agent



MONTANA
STATE UNIVERSITY

EXTENSION

Objective:

The perfect site in terms of pollen and nectar source would have a mix of plant species that will be flowering at different times of the year, so there are multiple species flowering throughout the year.



Pollen and Nectar

- Early Pollen source is critical for brood development and hive growth – easily need 100 lbs/year/hive
- Nectar supply in the summer ensures excess honey reserves for extracting in the fall



Pollen Rich Plants

- Aster
- Clover
- Dandelion
- Fruit blossoms
- Goldenrod
- Maple
- Wild mustard
- Poplar
- Ragweed
- Willow



Photo by Richard Murray

Nectar Rich Plants

- **Alfalfa**
- **Aster**
- **Buckwheat**
- **Clover**
- **Fireweed**
- **Goldenrod**
- **Holly**
- **Horsemint**
- **Locust**
- **Sage**
- **Sourwood**
- **Sweetclover**
- **Willow**



**This may require our intervention.
Many sites are deficient in either
early flowering species and/or late
fall flowering species.**



MONTANA
STATE UNIVERSITY

EXTENSION

Re-vegetation

- Direct Seeding – best done in the fall, dormant seeding for most species or early spring; using a seed drill vs. broadcasting; use a local dependable source for seed; certified seed would be best
- Transplants – expensive; may work with rhizomatous and stoloniferous species; labor intensive



Early Native Plant Species

- **Thinleaf Alder (*Alnus incana*)**
Mountain (Sitka) Alder (*Alnus viridis*)
- **Broom Snakeweed (*Gutierrezia sarothrae*)**



Early Native Plant Species

- Yellowbells (*Fritillaria pudica*)
- Shooting Star (*Dodecatheon conjugens*)



MONTANA
STATE UNIVERSITY

EXTENSION

Early Native Plant Species

- Pasqueflower
(*Pulsatilla patens*)
- Arrowleaf balsamroot
(*Balsamorhiza sagittata*)



Early Native Plant Species

- Oregon Grape (*Mahonia repens*)
- Prairie smoke (*Geum triflorum*)



Mid-Season Native Plant Species

- Sticky geranium
(*Geranium viscosissimum*)



- Low Larkspur
(*Delphinium bicolor*)
- Tall Larkspur
(*Delphinium glaucescens*)



Mid-Season Native Plant Species

- Blue Flax (*Linum lewisii*)

Lupin (*Lupinus* spp.)



MONTANA
STATE UNIVERSITY

EXTENSION

Mid-Season Native Plant Species

- **Blanketflower**
(*Gaillardia aristata*)
- **Wild Strawberry**
(*Fragaria virginiana*)



MONTANA
STATE UNIVERSITY

EXTENSION

Mid-Season Native Plant Species

- Chokecherry
(*Prunus virginiana*)



- American Plum
(*Prunus americana*)



Late-Season Native Plant Species

- Rocky Mountain Bee Plant
(*Cleome serrulata*)
- Curlycup Gumweed
(*Grindelia squarrosa*)



MONTANA
STATE UNIVERSITY

EXTENSION

Late-Season Native Plant Species

- Canada Goldenrod
(*Solidago canadensis*)



- Beebalm
(*Monarda fistulosa*)



Late-Season Native Plant Species

- Rabbitbrush
(*Chrysothamnus nauseosus*)
- Prairie Coneflower
(*Ratibida columnifera*)



Non-natives, Non-invasive/non-noxious

- **Lacy Phacelia**
(*Phacelia tanacetifolia*)
- Native to CA and AZ



MONTANA
STATE UNIVERSITY

EXTENSION



MONTANA
STATE UNIVERSITY

EXTENSION



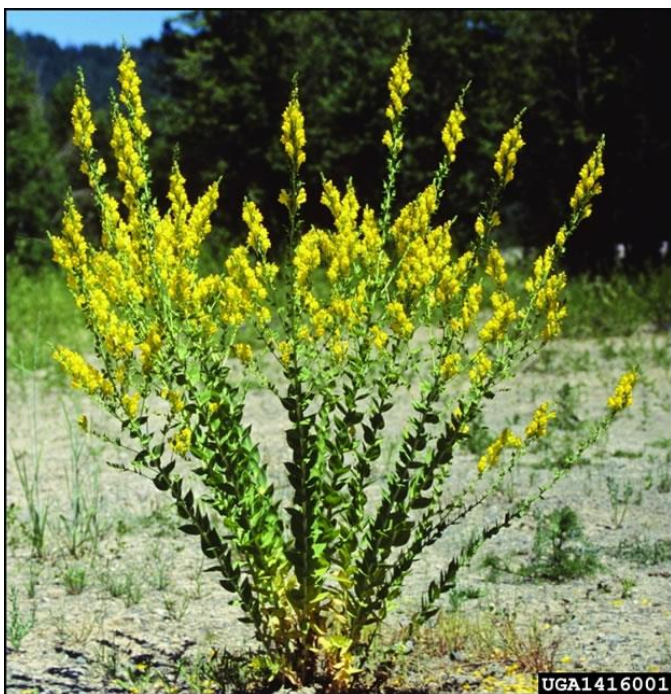
Non-natives, Non-invasive/non-noxious

- Clovers (Yellow Sweet, White Dutch, Alsike, Crimson, Strawberry, etc.)



What about weeds?

- Many of our common and noxious weeds are good pollen and nectar sources



MONTANA
STATE UNIVERSITY

EXTENSION

What is the deal with alfalfa and honey bees?

- “Honey bees are reluctant pollinators of alfalfa, due to their apparent aversion to being struck forcefully in the head when the flower is tripped. Honey bees also learn to forage for nectar without tripping the flowers, which circumvents the pollination mechanism.”
- For that reason, alfalfa leaf cutter bees are used to pollinate alfalfa.



Alfalfa and Honey bees



MONTANA
STATE UNIVERSITY

EXTENSION

Some bees are better pollinators of flowers like alfalfa, blueberry, and tomato than honey bees

- because of flower structure--in alfalfa, honey bees avoid being whacked on the head

alfalfa



untripped vs. tripped

www.delange.org/Alfalfa/0s00010s.jpg

[/alfalfa.okstate.edu/images/flowers/flower-06.htm](http://alfalfa.okstate.edu/images/flowers/flower-06.htm)

alkali bee
Nomia melanderi



alfalfa leaf cutter bee (European)
Megachile rotundata



www.tierundnatur.de/wildbienen/eb-rrrotu.htm



MONTANA
STATE UNIVERSITY

EXTENSION

Sourcing Seeds

- Local seed companies: Bruce Seed Farm, Circle S Seeds, etc.
- Granite Seeds in Utah
- Lots of online companies: Seed Savers (www.seedsavers.org), Fedco Seeds (www.fedcoseeds.com), Johnny's Seeds (www.johnnyseeds.com), etc.



What about collecting seeds?

- Permit is required on public land
- Opportunities on private land
- Proper equipment is essential



Summary

- **Assess your site; take a site inventory**
- **What are you lacking, or what could be improved?**
- **Plan ahead**
- **Select quality seed**
- **Enjoy the benefits of an improved site**

